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Dear Reader:

This brochure summarizes the Big Sandy Management Framework Plan (MFP) final decisions for the Federal Coal Management Program in the Big Sandy Resource Area. It also describes the process used to develop these decisions. Because this brochure is a summary, some of the detailed supportive data, including legal land descriptions, are not included. The illustrations included should not be used for detailed analysis or interpretation. Detailed information is available for public review in the Rock Springs District Office and the Big Sandy Resource Area office.

The field work supporting this planning effort was performed by BLM personnel in coordination with other Federal, State, and local agencies; industry; and other interest groups. Many organizations and individuals have assisted us in the preparation of these final decisions. Thank you for your interest in making these coal decisions as equitable as possible.

Sincerely yours,

Jerry K. Osthoff

District Manager

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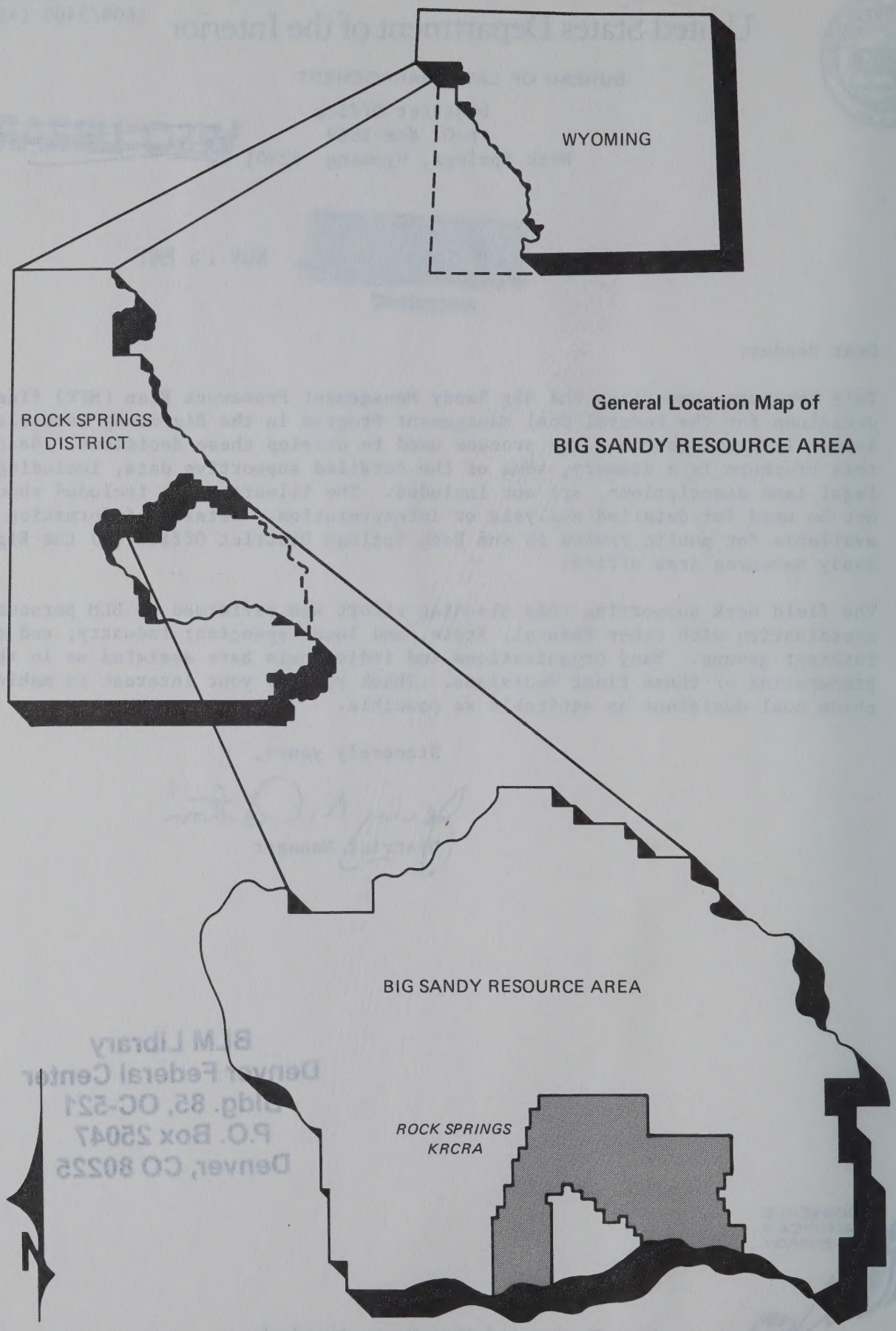

General Location Map of

BIG SANDY RESOURCE AREA

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NOVEMBER 1981

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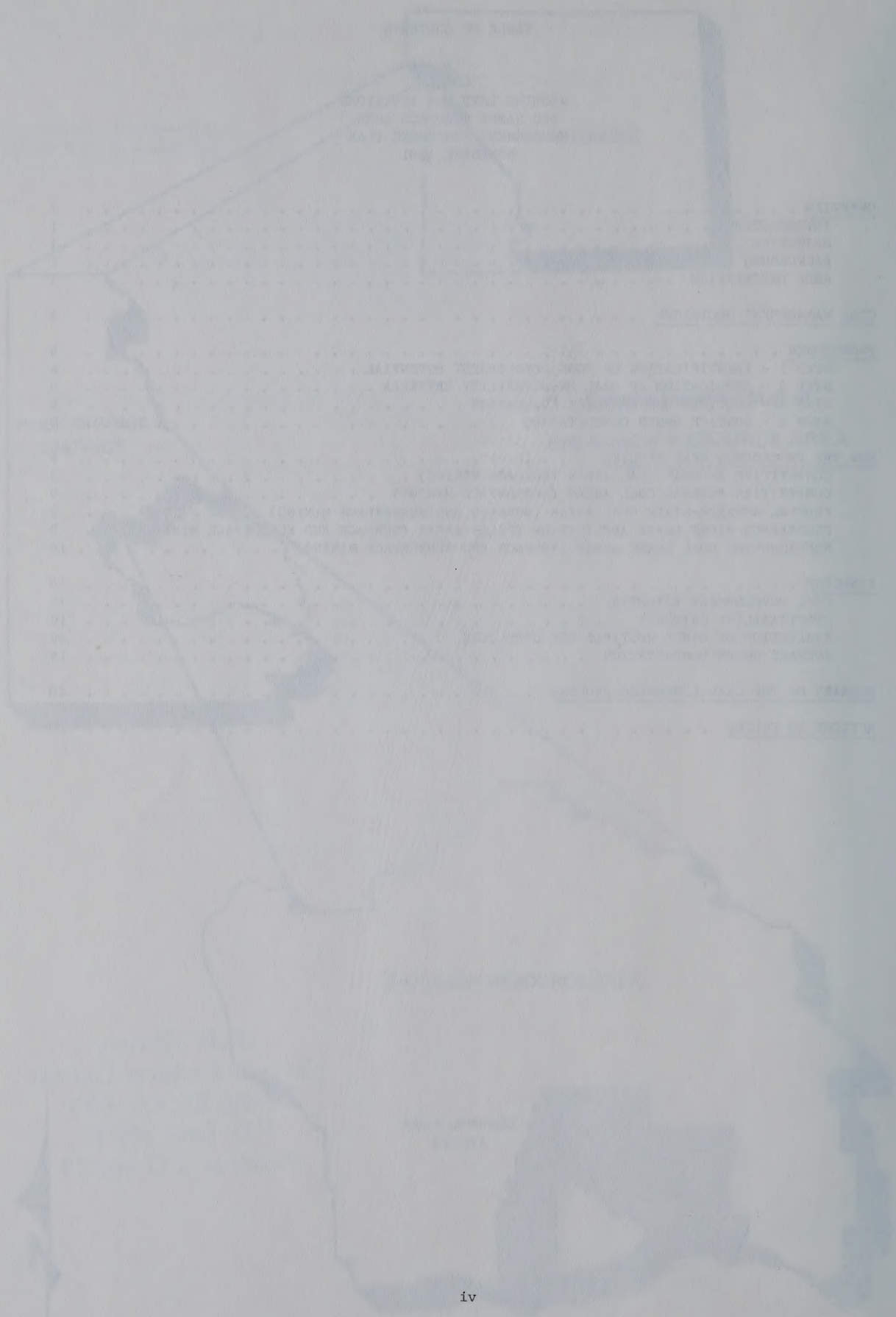


OVERVIEW

INTRODUCTION

This brochure summarizes the final Federal coal management decisions for the Bureau of Land Management's Big Sandy Resource Area located in southwest Wyoming. The process used to arrive at these decisions is briefly explained. This summary is intended to aid the public in understanding the Federal Coal Management Program as it applies to the Big Sandy Resource Area and to show the requirements that must be met under Title 43 Code of Federal Regulations (CFR) 3400. These planning decisions will guide management of the Federal coal resource in this area during the 1980's.

OBJECTIVE

Since the last Management Framework Plan (MFP) was completed for the Big Sandy Resource Area in 1977, the Secretary of the Interior has reviewed past policies for leasing Federal coal and has adopted a new Federal Coal Management Program. The objective in managing the Federal coal resource in the Big Sandy Resource Area is to (1) provide for both short and long range development of Federal coal in an orderly and timely manner, consistent with the new Federal Coal Management Program, policies, environmental integrity, national energy needs, and related demands; and (2) identify as much Federal coal as possible that is acceptable for development to help meet coal production goals for 1990 and beyond.

The purpose of this planning effort was to arrive at coal management decisions for the Big Sandy Resource Area that will (1) guide the allocation of the Federal coal resource development by both surface and subsurface mining methods; and (2) provide an analysis which can be used in considering areas for new competitive Federal coal leasing, proposals for lease modifications, emergency leases and exchanges, and in processing noncompetitive Preference Right Lease Applications (PRLAs).

BACKGROUND

Due to developments in the world energy situation during the last few years and the resulting effects on the national economy, accelerated production of domestic energy resources has become a high priority national goal. Current national policy is to decrease U.S. dependence upon foreign oil and achieve energy independence in the late 1980's. This policy includes development of other energy resources and conversion of energy resources to oil and gas uses, offsetting dwindling reserves of domestic oil and gas. The Department of the Interior and Bureau of Land Management (BLM) have a major responsibility in the fulfillment of these energy goals through making Federal energy resources (coal in this instance) available for development.

In developing the new Federal Coal Management Program, several national coal production regions were established. The Big Sandy Resource Area lies within the Green River-Hams Fork coal region of northwestern Colorado and southcentral/southwestern Wyoming. The first coal lease sale under the new Federal Coal Management Program in this region was held in January 1981. The only Federal coal from Wyoming included in this sale was contained in a few lease tracts in the Hanna Basin area of Carbon County.

The October 1980 Secretarial Issue Document on coal leasing in the Green River-Hams Fork region, recognized a shortfall in Federal coal leasing in 1981 and the need for an early follow-up lease sale, which is scheduled for March 1984. These lease sale dates were established to meet projected production goals necessary to meet energy demands in 1990. To meet these production goals BLM considered possible production from already producing Federal coal leases, from existing nonproducing leases, from noncompetitive PRLAs, and from potential new competitive leasing of Federal coal.

AREA DESCRIPTION

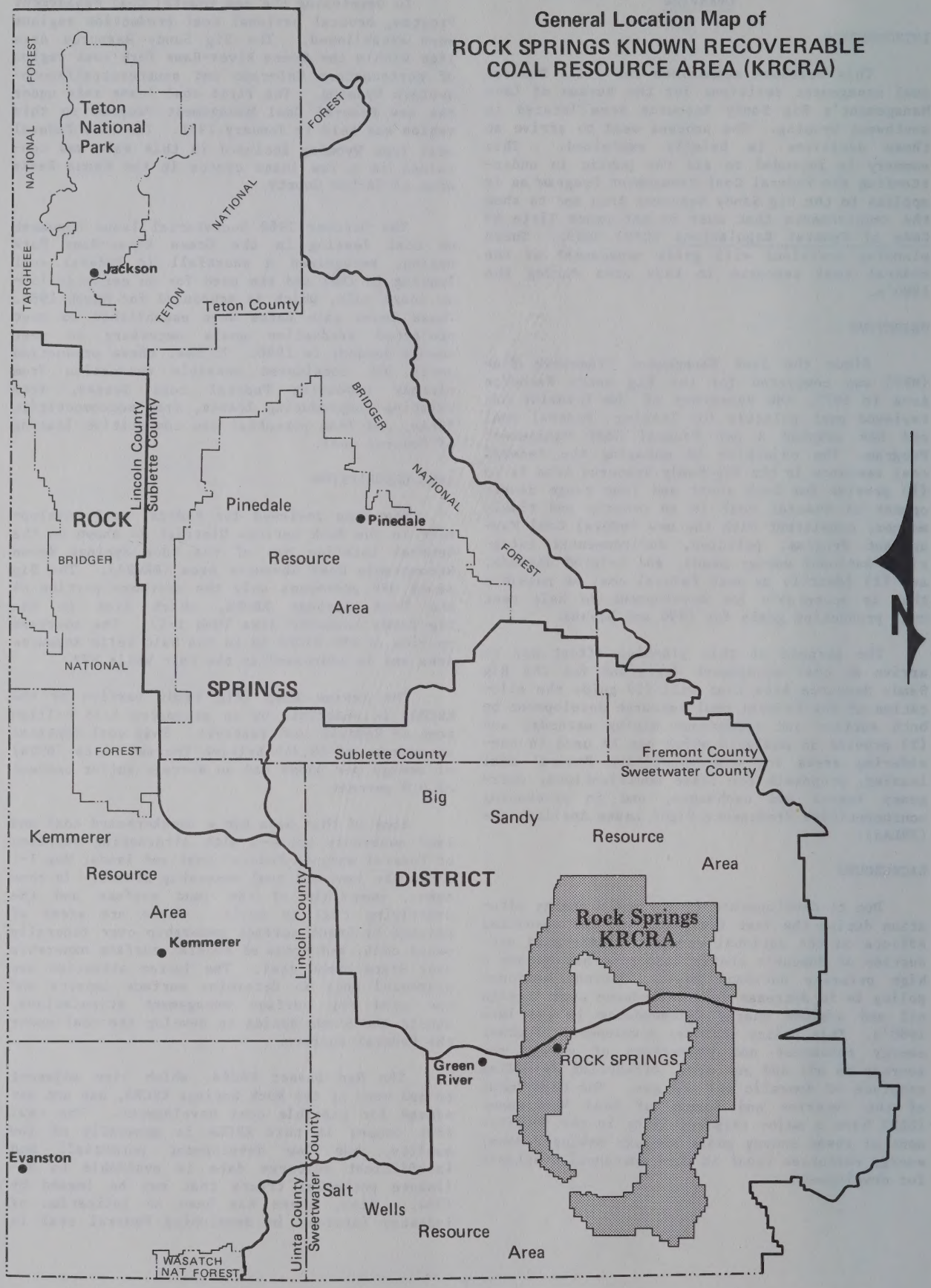
The area reviewed for Federal coal development in the Rock Springs District is shown on the General Location Map of the Rock Springs Known Recoverable Coal Resource Area (KRCRA). The Big Sandy MFP addresses only the northern portion of the Rock Springs KRCRA, which lies in the Big Sandy Resource Area (Map 1-1). The southern portion of the KRCRA is in the Salt Wells Resource Area and is addressed in the Salt Wells MFP.

The review area (Big Sandy portion of the KRCRA) is underlain by an estimated 4.25 billion tons of Federal coal reserves. This coal contains an average of 10,244 British Thermal Units (BTUs) of energy per pound and an average sulfur content of 0.8 percent.

Some of this area has a checkerboard coal and land ownership pattern with alternating sections of Federal and non-Federal coal and lands. Map 1-1 shows the land and coal ownership status. In some cases, ownership of the land surface and the underlying coal is split. There are areas of private or State surface ownership over federally owned coal, and areas of Federal surface ownership over State owned coal. The latter situation was addressed only to determine surface impacts and the need for surface management stipulations, should the State decide to develop the coal under the Federal surface.

The Red Desert KRCRA, which lies adjacent to and east of the Rock Springs KRCRA, was not assessed for possible coal development. The coal that occurs in this KRCRA is generally of low quality, has low development potential, and insufficient resource data is available to delineate potential tracts that may be leased by 1984. Also, there has been no indication of industry interest in developing Federal coal in

General Location Map of
ROCK SPRINGS KNOWN RECOVERABLE
COAL RESOURCE AREA (KRCRA)



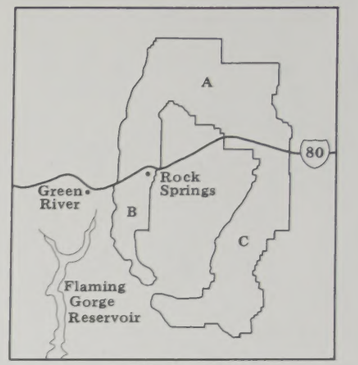
R. 104 W. R. 103 W. R. 102 W. R. 101 W. R. 100 W.

T. 23 N.
T. 22 N.
T. 21 N.
T. 20 N.
T. 19 N.

SAND DUNES
BOARS TUSK
NORTH TABLE MOUNTAIN
SOUTH TABLE MOUNTAIN
CONTINENTAL DIVIDE
LEUCITE HILLS
BLACK ROCK
Black Rock Creek
Killpecker Creek
Superior
Reliance
Point of Rocks
Jim Bridger Plant

4-17 4-15 4-19 4-18 4-49 187 371 80 30

AREA MAP A



LOCATOR MAP

Federal Surface Federal Coal
Federal Surface State Coal
Private Surface Federal Coal
State Surface Federal Coal
Private Surface Private Coal

Scale 1 : 200,000

0 5 10

Miles

MAP 1–1

LAND and COAL OWNERSHIP

this area. Any consideration for possible coal development in this KRCRA is deferred to future planning efforts. In the interim, coal resource data gathering and exploration of this area will occur as demand and need dictate.

The MFP does not address existing producing Federal coal leases. The new Federal Coal Management Program requirements relative to these leases will be handled on a case-by-case basis at the time of cyclic lease readjustment periods (43 CFR 3451). The MFP does address nonproducing Federal coal leases as explained later in this brochure.

COAL MANAGEMENT DECISIONS

The following Federal coal management decisions and the procedures used in their development, are in accordance with the Mineral Leasing Act of 1920, the Federal Coal Leasing Amendments Act of 1976, the Federal Land Policy and Management Act of 1976, the Surface Mining Control and Reclamation Act of 1977, the Federal Coal Management Program adopted by the Secretary of the Interior in June 1979, and all relative Federal regulations.

The proposed coal management decisions for the Big Sandy Resource Area were issued on June 19, 1981. A public open house and hearing on the proposals were conducted on July 8, 1981, and the 30-day comment period ended on July 21, 1981. During and following the comment period, surface-owner consultation and formal consultation with Wyoming State government on certain of the coal unsuitability criteria were completed. The records of these public involvement and consultation activities are on file for public viewing at the BLM Rock Springs District and Big Sandy Resource Area offices. In summary, these activities raised the following issues and concerns regarding the proposed decisions:

- Apparent procedural inconsistencies between BLM offices in applying some of the coal unsuitability criteria and related errors in identifying areas as unsuitable or acceptable for coal development.

- Determinations of floodplain areas (Criterion #16) to be unsuitable for coal development on the basis of insufficient data and incomplete procedure.

- Recommendations that areas of critical and sensitive wildlife values (Criteria #11, #13, and #15) should be acceptable for coal development, rather than unsuitable, pending studies for capabilities of mitigation, reclamation, etc.

- Impracticalities of establishing firm utility corridors in checkerboard land pattern areas and inflexible prohibition of coal development within them.

- An oversight in addressing real and potential conflicts between oil and gas operations and coal development.

The proposed decisions were reevaluated on the basis of the public comment and consultation information obtained and the final Federal coal management decisions for the Big Sandy Resource Area were developed accordingly. Since this brochure is a summary, the final decisions presented reflect only the results of the final analysis. The detailed information, rationale, and analyses that resulted in either changing or not changing some of the proposed decisions are available for viewing and discussion at the BLM Rock Springs District and Big Sandy Resource Area offices.

A more detailed description of the findings and procedures used to arrive at these decisions is contained in subsequent sections of this brochure. Maps delineating the Federal Coal Management Decisions for Surface Mining (Map 1-4), Subsurface Mining (Map 1-5), and the results of the Coal Unsuitability Review and Multiple Use Conflict Evaluation for PRLAs, Federal Surface-State Coal Areas, and nonproducing leases (Map 1-6), are located at the end of this brochure.

BLM hereby adopts the following decisions for managing the Federal coal resources and Federal surface-State coal areas in the Big Sandy Resource Area.

1. For competitive Federal coal areas with surface mining potential within the Big Sandy portion of the Rock Springs KRCRA:

   a. About 31,854 acres containing approximately 157.6 million tons of coal are acceptable for coal development by surface mining methods.

   b. Coal leasing will be deferred on 420 acres of producing oil and gas fields containing 2.1 million tons of coal, unless or until it is determined that coal development will not interfere with oil and gas operations or that such conflicts can be mitigated in these areas.

These areas will be given further consideration for new competitive Federal coal leasing, emergency leasing, lease modifications, and exchange proposals under the new Federal Coal Management Program.

2. For competitive Federal coal areas with subsurface mining potential within the Big Sandy portion of the Rock Springs KRCRA:

   a. About 53,546 acres containing approximately 363.1 million tons of coal are acceptable for coal development by subsurface mining methods.

   b. About 50,462 acres are acceptable for the surface operations and impacts associated with subsurface mining, however, 6,746 of these acres are only acceptable for very limited surface operations and impacts (i.e., subject to restrictive types and placement of facilities, seasonal restrictions, etc.).

c. Coal leasing will be deferred on 960 acres of producing oil and gas fields containing approximately 6.5 million tons of coal, unless or until it is determined that coal development will not interfere with oil and gas operations or that such conflicts can be mitigated in these areas.

d. About 1,760 acres containing approximately 11.9 million tons of coal are acceptable for further consideration for coal development by subsurface mining methods, pending results of the ongoing utility corridor study.

These areas will be given further consideration for new competitive leasing, emergency leasing, lease modifications, and exchange proposals under the new Federal Coal Management Program.

3. For the 5,760 acres of Federal surface-State coal areas reviewed within the Big Sandy portion of the Rock Springs KRCRA (both surface and subsurface mining methods):

a. About 4,400 acres are acceptable for coal development by surface mining methods.

b. The entire 5,760 acres are acceptable for coal development by subsurface mining methods. However, 160 acres of this area will carry a stipulation that no surface operations or impacts associated with subsurface mining will be allowed, unless other stipulations could be developed that would adequately protect the values and 1,200 acres of this area will carry a stipulation for allowing only very limited seasonal uses and types or placement of surface facilities, activities, etc.

For the remaining Federal surface-State coal areas in the Resource Area (some inside and some outside the KRCRA) that were not reviewed, the coal unsuitability review and multiple use conflict evaluation will be conducted on a case-by-case basis, should the State lease the coal or as mining and reclamation plans are submitted.

4. For PRLAs (both surface and subsurface mining methods): Process the one PRLA in the Big Sandy Resource Area (#W-0308923) by the end of Fiscal Year 1982. Special attention will be given to those sensitive value areas identified through the coal unsuitability review and multiple use evaluation in the preparation of the environmental assessment for this PRLA. This assessment will result in development of special stipulations necessary for protection of sensitive values. These protective stipulations will be carried through the final processing and leasing decision for the PRLA.

5. For nonproducing coal leases (both surface and subsurface mining methods): Any further actions on nonproducing leases are deferred until such time as mining and reclamation plans are submitted or until lease readjustments occur. Special attention will be given to those sensitive value areas identified through the coal unsuitability review and multiple use evaluation.

6. Keep the entire Big Sandy Resource Area open to coal resource inventory and exploration, to aid in identification of coal resources and their development potential.

PROCEDURES

The Federal Coal Management Program established four major steps to be used in the identification of Federal coal areas that are acceptable for coal development. The four steps are (1) identification of coal development potential; (2) application of the coal unsuitability criteria; (3) multiple use conflict evaluation; and (4) surface owner consultation. Collectively, these steps are called the "Coal Screening Process" (43 CFR 3420.2-3) and are applied in sequence to the review area.

The following is a description of each of these steps and how they were applied to the review area.

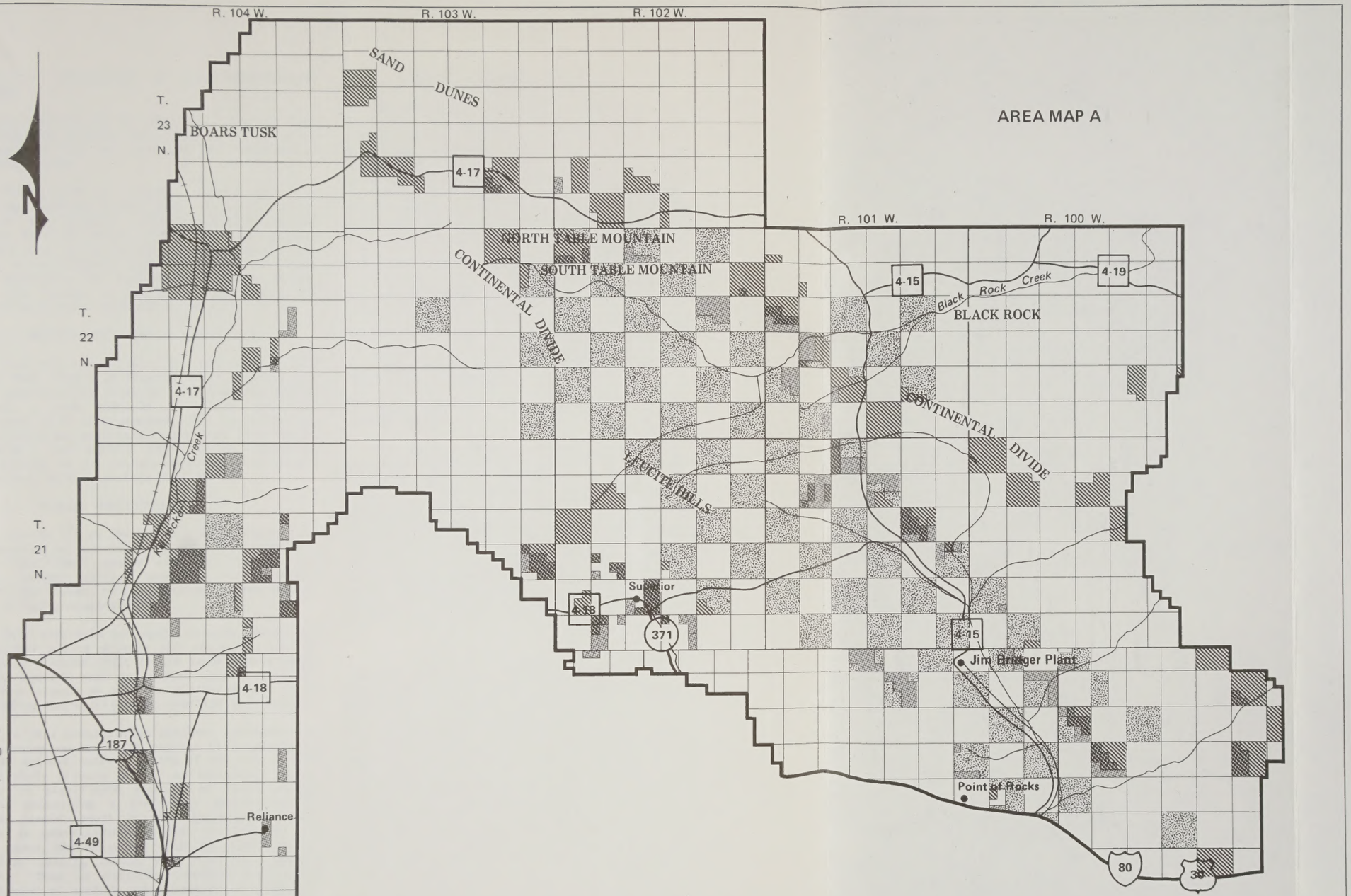
STEP 1 - IDENTIFICATION OF COAL DEVELOPMENT POTENTIAL

Areas of known high and moderate coal development potential for both surface and subsurface mining were identified using Geological Survey (GS) Coal Resource Occurence-Coal Development Potential (CRO-CDP) Maps. Other areas assumed to have at least moderate development potential were also identified, using geological and economic data submitted by coal companies and interpretations of available geological data from various other sources. The areas of known and assumed high and moderate coal development potential are shown on Map 1-2.

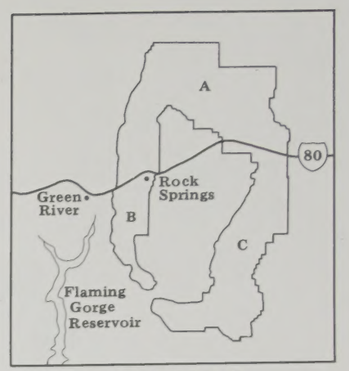
High development potential coal for surface mining has a stripping ratio of 0 to 10 cubic yards of overburden per ton of coal. Moderate development potential coal for surface mining has a stripping ratio of 10 to 15 cubic yards of overburden per ton of coal. Areas of high and moderate coal development potential for subsurface mining methods are defined as areas underlain by coal beds at depths ranging from 200 to 1,000 feet and 1,000 to 2,000 feet, respectively.

In applying this screening step, some areas of low and unknown coal development potential within the review area were excluded from further consideration.

The remaining three screening steps are applied to those high and moderate coal development potential areas (both known and assumed) identified in Step 1. These latter steps are applied in sequence and only to the lands identified as acceptable for coal development in each preceding step. This results in (1) identifying areas that are acceptable for coal development in each of these 3 steps; and (2) identifying areas that are unsuitable (Step 2), unacceptable (Step 3), and unavailable (Step 4) for coal development. Finally, all Federal coal areas that pass through the screening process are determined to be acceptable for coal development by either surface or subsurface mining methods or both.



AREA MAP A



LOCATOR MAP

Scale 1 : 200,000

0 5 10

Miles

- High and Moderate Potential-Surface Mining
- High and Moderate Potential–Sub-Surface Mining
- High and Moderate Potential-Surface and Sub-Surface Mining
- Other High Interest and Coal Occurrence Areas Surface and Sub-Surface Mining

MAP 1–2

COAL DEVELOPMENT POTENTIAL

STEP 2 - APPLICATION OF COAL UNSUITABILITY CRITERIA

As required by 43 CFR 3461, the 20 coal unsuitability criteria were applied to all known and assumed high and moderate coal development potential areas.

These criteria involve consideration of existing resource values such as scenic areas, natural and historic values, wildlife, floodplains, alluvial valley floors, etc. The purpose of this step is to identify areas with key features of environmental sensitivity that would make them unsuitable for surface coal mining, subsurface coal mining, or for surface operations and impacts associated with subsurface coal mining.

STEP 3 - MULTIPLE USE CONFLICT EVALUATION

This step is a review of those Federal coal lands that remain acceptable after applying the coal unsuitability criteria. It involves consideration of other multiple use values (i.e., not concerned with the unsuitability criteria) and identifying any additional areas that would be unacceptable for surface coal mining, subsurface coal mining, or for surface operations and impacts associated with subsurface coal mining.

STEP 4 - SURFACE OWNER CONSULTATION

Section 714 of the Surface Mining Control and Reclamation Act requires BLM to consult with certain "qualified" owners of split estate lands (i.e., private surface ownership over federally owned coal) when surface mining of the Federal coal is being considered.

This step does not apply to areas where only subsurface mining methods are concerned. It involves only those split estate lands within competitive Federal coal areas that remain acceptable for development by surface mining methods after conducting the multiple use conflict evaluation.

In this consultation process, qualified surface owners are asked to express their preference for or against surface mining of the Federal coal under their private lands. An individual surface owner or significant numbers of these surface owners expressing a preference against surface mining, could result in identifying split estate lands as unavailable for coal development. In such cases, the areas can still be considered for possible leasing beyond this land use planning stage. This is possible because the actual commitment of surface owner consent or refusal to consent does not occur until later in the coal activity planning process, prior to offering a lease for the Federal coal involved.

HOW THE PROCEDURES ARE APPLIED

To help clarify the coal screening process, two Federal coal categories are identified: PRLAs (noncompetitive potential Federal coal lease areas) and competitive Federal coal areas. Competitive coal areas are those with the potential to be considered for new competitive Federal coal leasing, modifications to existing leases, emergency leasing, and exchanges. Also for clarity, situations involving Federal surface overlying State coal are identified.

COMPETITIVE FEDERAL COAL AREAS (SURFACE MINING)

All four steps of the screening process are applicable to these areas.

COMPETITIVE FEDERAL COAL AREAS (SUBSURFACE MINING)

Only steps 1-3 of the screening process are applicable to these areas.

FEDERAL SURFACE-STATE COAL AREAS (SURFACE AND SUBSURFACE MINING)

Only steps 2 and 3 of the screening process are applicable to these areas. In applying these screening steps, any areas of the Federal land surface with key features, environmental sensitivity, or other values that would make them unsuitable or unacceptable for coal development are identified. State owned coal reserves are not considered. The purpose behind applying these screening steps to these areas is to provide a basic resource analysis in the MFP for developing needed stipulations and protective measures for the Federal land surface, should the State decide to develop the coal. These areas are shown on Map 1-3.

In conducting this planning effort, BLM reviewed only those Federal surface-State coal areas within the Rock Springs KRCRA where industry indicated an interest in developing the coal. Thus, there are still some of these areas in the Big Sandy Resource Area (both inside and outside the KRCRA) that have not been reviewed. BLM generally considers potential coal development in these remaining areas to be a valid consideration and within the general scope of this and other land use plans covering the Resource Area. Coal unsuitability reviews and multiple use conflict evaluations for these remaining areas will be handled on a case-by-case basis as State coal leases are issued or as mining and reclamation plans are submitted.

PREFERENCE RIGHT LEASE APPLICATION (PRLA) AREAS (SURFACE AND SUBSURFACE MINING)

The connotation of "Preference Right" is that any leases issued on PRLAs are "noncompetitive." That is, if in the processing of PRLAs it is determined that the Federal coal they contain can be economically developed in an environmentally sound manner (either wholly or in part), the areas will be leased and the leases will be issued to only

the holders of the preference right applications. These rights were established under the former prospecting permit system before the Federal coal leasing moratorium went into effect.

The Federal Coal Leasing Amendments Act of 1976 abolished noncompetitive (Preference Right) leasing, subject to valid existing permits and applications. Under the new Federal Coal Management Program, BLM is now required to complete processing of all existing PRLAs by no later than December 1, 1984. However, one of the companies holding two PRLAs in the Salt Wells portion of the KRCRA has requested expeditious processing of their applications bacause they require the coal sooner than 1984. The coal regulations (43 CFR 3430.3) permit expeditious processing of PRLAs upon request. Since PRLA processing requires consideration of any PRLAs within the general area to identify cumulative impacts, all the PRLAs will be processed on the same accelerated schedule. Processing is expected to be completed (i.e., to the point of issuing leases or rejecting applications) by December 1982. This is a tentative target date and subject to change.

Map 1-3 shows the PRLA within the Big Sandy Resource Area. Procedures for processing PRLAs are only partially related to the coal screening process. That is, only steps 2 and 3 of the screening process are applicable. Conducting these procedures for PRLAs may be completed as a part of the land use planning process, or it could be conducted as a separate process.

As a matter of efficiency and timing BLM elected to conduct the unsuitability criteria application and the multiple use conflict evaluation for the PRLAs during land use planning. Thus, the MFP provides a basic resource analysis for use in later PRLA processing requirements.

The potential impacts of coal development upon the values and concerns identified in the PRLA area will be addressed later in the preparation of an environmental assessment or environmental impact statement. This will result in development of necessary stipulations and mitigation requirements to be used in the final adjudication of the applicant's right to a coal lease. Final adjudication could result in either rejection of the application, issuance of the coal lease, or exchange of sensitive value areas that should not be mined.

NONPRODUCING COAL LEASE AREAS
(SURFACE AND SUBSURFACE MINING)

Only steps 2 and 3 of the screening process are applicable to these areas. Map 1-3 shows the nonproducing leases within the Big Sandy Resource Area.

Under the new Federal Coal Management Program, BLM is required to apply the coal unsuitability criteria to all existing Federal coal leases (both nonproducing and producing leases) either at the time of land use planning, submission of mining and reclamation plans, or when the lease readjustment period occurs. Producing coal leases are not addressed here, but will be handled on a case-by-case basis at the time of cyclic lease readjustment.

As a matter of efficiency and timing BLM elected to conduct the unsuitability criteria application and the multiple use conflict evaluation for the nonproducing leases during land use planning. This will serve as a basic resource analysis for later use in developing necessary stipulations and mitigation requirements for mining and reclamation plans and lease readjustment.

Note: Unsuitability criteria 9-15 were not applied to the nonproducing leases. This was a result of a civil suit action filed by Texaco, Incorporated and the National Coal Association, et al. vs. Cecil D. Andrus, Secretary, Department of Interior, et al. A United States District Court decision on this action, in favor of the plaintiffs, was filed on August 15, 1980. The decision remands several parts of the coal regulations to the Secretary concerning his authority to apply some of the unsuitability criteria to existing leases. The decision was subsequently appealed by BLM and has not been fully resolved. However, BLM has conceded that unsuitability criteria 9-15 are not applicable to existing producing or nonproducing leases.

FINDINGS

The following is a summary of the findings and related recommendations resulting from conducting the coal screening process. All acreage and coal tonnage figures are approximate. Additional documentation and background information, explaining in detail how the procedures were used and the findings made, are available for public review at BLM's Rock Springs District and Big Sandy Resource Area offices.

COAL DEVELOPMENT POTENTIAL

Table 1-1 (located at the end of the brochure) summarizes the findings of Step 1 - Federal Coal Development Potential. See also Map 1-2.

UNSUITABILITY CRITERIA

The following discussion briefly explains the findings resulting from application of each unsuitability criterion. Tables 1-2 through 1-4 list the findings by criterion. Tables 1-5 through 1-7 summarize the overall results of the application of the unsuitability criteria. Maps 1-4, 1-5, and 1-6 also show the overall summary results of applying the criteria. All of these tables and maps are located at the end of the brochure.

Criterion #1 - Federal Land Systems

Competitive Federal Coal Areas

About 880 acres containing approximately 4.4 million tons of coal were determined to be

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T. 23 N. T. 22 N. T. 21 N. T. 20 N. T. 19 N.

SAND DUNES

BOARS TUSK

NORTH TABLE MOUNTAIN

SOUTH TABLE MOUNTAIN

CONTINENTAL DIVIDE

LEUCITE HILLS

BLACK ROCK

Black Rock Creek

Killpecker Creek

Superior

Reliance

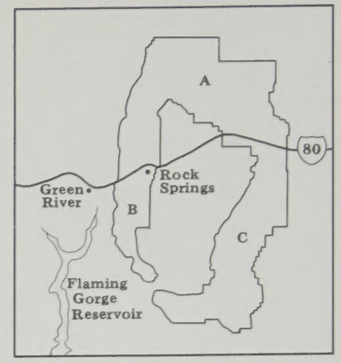
Jim Bridger Plant

Point of Rocks

4-15 4-17 4-18 4-19 4-49 187 371 80 30

X Y Z 1

AREA MAP A



LOCATOR MAP

Federal Surface-State Coal Areas

PREFERENCE RIGHT LEASE APPLICATIONS

1 W–0308923

NON–PRODUCING COAL LEASES

X W–0220486

Y W–3438

Z W–0313201

Scale 1 : 200,000

0 5 10

Miles

MAP 1–3

PREFERENCE RIGHT LEASE APPLICATIONS (PRLAs), FEDERAL SURFACE–STATE COAL AREAS, and NON–PRODUCING COAL LEASES

unsuitable for surface mining methods; and about 840 acres containing approximately 5.7 million tons of coal were determined to be unsuitable for subsurface mining methods and for surface operations and impacts associated with subsurface mining. These areas are within the city limits of Rock Springs and South Superior.

Federal Surface-State Coal Areas

No acres were determined to be unsuitable within Federal surface-State coal areas .

PRLA Areas

No acres were determined to be unsuitable within PRLA areas.

Nonproducing Coal Lease Areas

No acres were determined to be unsuitable within nonproducing coal lease areas.

Criterion #2 - Rights-of-Way and Easements

Most of the rights-of-way crossing the coal areas can be relocated to accommodate coal mining and related activities. Thus, BLM made a "general" determination that most right-of-way areas are acceptable for coal development, subject to valid existing rights and negotiations for relocating if necessary, appropriate stipulations and consistency with current planning and management decisions. Any unforeseen conflicts in these areas should be identified and resolved during the coal activity planning process or in mining and reclamation plan development. Only those areas where coal development would create significant conflicts with rights-of-way are identified below.

Competitive Federal Coal Areas

About 1,242 acres containing approximately 6.1 million tons of coal were determined to be unsuitable for surface mining methods. The rights-of-way involved are Interstate 80, State Highway 187, Jim Bridger Surge and Water Storage Pond, and an area adjacent to the Interstate 80 right-of-way containing numerous transmission line rights-of-way.

About 1,278 acres containing approximately 8.7 million tons of coal were determined to be unsuitable for subsurface mining methods. Of this area, about 302 acres were also determined to be unsuitable for surface operations and impacts associated with subsurface mining; and about 976 acres are restricted to very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

Federal Surface-State Coal Areas

No acres were determined to be unsuitable within Federal surface-State coal areas.

PRLA Areas

No acres were determined to be unsuitable within PRLA areas.

Nonproducing Coal Lease Areas

No acres were determined to be unsuitable within nonproducing coal lease areas.

Criterion #3 - Buffer Zones for Rights-of-Way, Communities, and Buildings

A 100-foot buffer zone was established on each side of the rights-of-way for Federal and State highways. A 300-foot buffer zone was established around occupied dwellings There are no public cemeteries, schools, churches, community or institutional buildings, or public parks within the Federal coal areas.

Competitive Federal Coal Areas

About 118 acres containing approximately 0.6 million tons of coal were determined to be unsuitable for surface mining methods.

Note: 24 acres of this area overlap with an unsuitable area identified under Criterrion #2.

About 108 acres containing approximately 0.5 million tons of coal were determined to be unsuitable for subsurface mining methods and for surface operations and impacts associated with subsurface mining.

Note: 12 acres of this area overlap with an unsuitable area identified under Criterion #2.

Federal Surface-State Coal Areas

No acres were determined to be unsuitable within Federal surface-State coal areas.

PRLA Areas

No acres were determined to be unsuitable within PRLA areas.

Nonproducing Coal Lease Areas

No acres were determined to be unsuitable within nonproducing coal lease areas.

Criterion #4 - Wilderness Study Areas

No areas were determined to be unsuitable under this criterion.

Criterion #5 - Scenic Areas

No areas were determined to be unsuitable under this criterion.

Criterion #6 - Lands Used for Scientific Study

No areas were determined to be unsuitable under this criterion.

Criterion #7 - Historic Lands and Sites

Portions of the South Pass-Point of Rocks Stage Route and the Natural Corrals area are located within the Big Sandy Resource Area and are eligible for nomination to the National Register of Historc Places. These sites plus a 1/4-mile buffer zone were considered in applying this criterion.

Competitive Federal Coal Areas

About 960 acres containing 4.7 million tons of coal were determined to be unsuitable for surface mining methods.

No areas were determined to be unsuitable for subsurface mining, however, about 1,440 acres with subsurface mining potential were determined to be unsuitable for surface operations and impacts associated with subsurface mining.

Federal Surface-State Coal Areas

No acres were determined to be unsuitable within Federal surface-State coal areas.

PRLA Areas

No acres were determined to be unsuitable within PRLA areas.

Nonproducing Coal Lease Areas

No acres were determined to be unsuitable within nonproducing coal lease areas.

Criterion #8 - Natural Areas

No areas were determined to be unsuitable under this criterion.

Criterion #9 - Federally Listed Endangered Species Habitat

No areas were determined to be unsuitable under this criterion.

Criterion #10 - State Listed Endangered Species Habitat

No areas were determined to be unsuitable under this criterion.

Criterion #11 - Bald and Golden Eagle Nests

Eagle nests and appropriate buffers were identified by the Fish and Wildlife Service, BLM, and the Wyoming Game and Fish Department.

Competitive Federal Coal Areas

About 4,390 acres containing approximately 21.7 million tons of coal were determined to be unsuitable for surface mining methods.

Note: 60 acres of this area overlap with an unsuitable area identified under Criterion #7.

No areas were determined to be unsuitable for subsurface mining, however, about 3,620 acres are restricted to very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

Federal Surface-State Coal Areas

About 1,040 acres were determined to be unsuitable for surface mining methods.

No areas were determined to be unsuitable for subsurface mining, however, the above 1,040 acres are restricted to very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

PRLA Areas

About 910 acres were determined to be unsuitable for surface mining methods.

No areas were determined to be unsuitable for subsurface mining, however, the above 910 acres are restricted to very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

Criterion #12 - Bald and Golden Eagle Roost and Concentration Areas

No areas were determined to be unsuitable under this criterion.

Criterion #13 - Falcon Cliff Nesting Sites

Competitive Federal Coal Areas

About 4,600 acres containing approximately 22.7 million tons of coal were determined to be unsuitable for surface mining methods.

Note: 2,700 acres of this area overlap with an unsuitable area identified under Criterion #11.

No areas were determined to be unsuitable for subsurface mining, however, about 4,230 acres are restricted to very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement, and types of facilities, seasonal occupancy, etc.).

Note: 2,000 acres of this area overlap with portions of the restricted area identified under Criterion #11.

Federal Surface-State Coal Areas

About 160 acres were determined to be unsuitable for surface mining methods.

No areas were determined to be unsuitable for subsurface mining, however, the above 160 acres are restricted to very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

PRLA Areas

No acres were determined to be unsuitable within PRLA areas.

Criterion #14 - Migratory Bird Habitat

The priority migratory bird habitat considerations involved with the coal area concern golden eagles and prairie falcons.

Competitive Federal Coal Areas

About 6,320 acres containing approximately 31.2 million tons of coal were determined to be unsuitable for surface mining methods.

Note: These 6,320 acres overlap with portions of unsuitable areas identified under Criteria #11, and #13.

No areas were determined to be unsuitable for subsurface mining, however, about 5,810 acres are restricted to very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

Note: These 5,810 acres overlap with portions of restricted areas identified under Criteria #11, and #13.

Federal Surface-State Coal Areas

About 1,120 acres were determined to be unsuitable for surface mining methods.

Note: These 1,120 acres coincide with the unsuitable areas identified under Criteria #11 and #13.

No areas were determined to be unsuitable for subsurface mining, however, the above 1,120 acres are restricted to very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

Note: These 1,120 acres coincide with the restricted areas identified under Criteria #11 and #13.

PRLA Areas

About 910 acres were determined to be unsuitable for surface mining methods.

Note: These 910 acres coincide with the unsuitable areas identified under Criterion #11.

No areas were determined to be unsuitable for subsurface mining, however, the above 910 acres are restricted to very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

Note: These 910 acres coincide with the restricted areas identified under Criterion #11.

Criterion #15 - Habitat for State High-Interest Wildlife

No areas were determined to be unsuitable under this criterion.

The primary habitat considerations involved with the coal areas are big game winter ranges. Through consultation with the Wyoming Game and Fish Department and the Governor's Office, it was determined that a portion of the Leucite Hills area could not be substantiated to be "critical" deer winter range, as originally identified. However, it was agreed that this area is "important" deer winter range and should be afforded appropriate protection to insure long term survival of the deer herd. Thus, BLM determined that the area in question is acceptable for coal development (either surface or subsurface) and that any Federal coal lease issued in the area will include a stipulation for developing appropriate mitigation measures that would protect the long term interests of the deer herd and the winter range habitat.

The lease stipulation would be to the effect that the lessee would be required to develop mitigation measures or a habitat improvement/development/reclamation plan (in conjunction with mining and reclamation plan requirements) to the satisfaction of BLM and the appropriate State agencies. Mitigation measures may include but would not be limited to such things as seasonal operations in some areas, off site or on site habitat improvement, special reclamation measures, or other appropriate measures for long term deer herd and winter habitat protection. The areas involved are identified on Maps 1-4, 1-5, and 1-6 as "Exception Areas" under this criterion.

Criterion #16 - Floodplains

Through consultation with the GS, it was determined that most of the identified floodplain areas can be mined in such a manner that all or certain stipulated methods of coal mining can be undertaken without substantial threat of loss to people or property and to the natural and beneficial values of the floodplain, either on a coal lease tract or downstream. Examples of lease stipulations may include but are not limited to relocation of channels during mining and restoration of channel locations after mining, controlling sediment yields and prohibiting spoil dumping in channels, lining channel bottoms, revegetation and general mined land reclamation, etc. The areas involved are idendified on Maps 1-4 and 1-5 as "exception areas" under this criterion.

One floodplain area that would present hazards and impacts to the town and residents of South Superior is addressed below.

Competitive Federal Coal Areas

About 240 acres containing approximately 1.2 million tons of coal were determined to be unsuitable for surface mining methods.

Note: These 240 acres overlap with portions of unsuitable areas identified under Criterion #1.

About 240 acres containing approximately 1.6 million tons of coal were determined to be unsuitable for subsurface mining and for surface operations and impacts associated with subsurface mining.

Note: These 240 acres overlap with portions of unsuitable areas identified under Criterion #1.

Federal Surface-State Coal Areas

No acres were determined to be unsuitable within Federal surfae-State coal areas.

PRLA Areas

No acres were determined to be unsuitable within PRLA areas.

Nonproducing Coal Lease Areas

No acres were determined to be unsuitable within nonproducing coal lease areas.

Criterion #17 - Municipal Watersheds

No areas were determined to be unsuitable under this criterion.

Criterion #18 - National Resource Waters

No areas were determined to be unsuitable under this criterion.

Criterion #19 - Alluvial Valley Floors

No areas were determined to be unsuitable under this criterion.

Criterion #20 - State Proposed Criteria

No areas were determined to be unsuitable under this criterion.

EVALUATION OF OTHER MULTIPLE USE CONFLICTS

The following discussion briefly explains the findings in evaluating the multiple use conflicts. Tables 1-8 through 1-10 (located at the end of the brochure) summarize the results of this step.

Competitive Federal Coal Areas (Surface Mining)

Conflict 1

Surface coal mining would conflict with the urban expansion areas for the cities of Rock Springs and South Superior.

Analysis

This conflict affects about 1,470 acres in the urban expansion areas surrounding South Superior and north of Rock Springs. These areas will be used to accommodate future growth of the cities. Surface mining in close proximity would adversely affect property values (i.e., dust, noise, etc.). Industrial activity is not compatible with residential use and a surface mine could be a potential safety hazard. Sweetwater County and the cities of Rock Springs and South Superior would not be in favor of coal development adjacent to urban areas.

Determination

About 1,470 acres containing approximately 7.3 million tons of coal were determined to be unacceptable for coal development by surface mining methods.

Conflict 2

Surface coal mining would conflict with the natural values of Emmons Cone.

Analysis

This conflict affects about 130 acres in the Emmons Cone area. Surface coal mining would destroy the natural values in this 160-acre area which contains a unique geologic landmark.

Determination

About 130 acres containing approximately 0.7 million tons of coal were determined to be unacceptable for coal development by surface mining methods.

Conflict 3

Surface coal mining would conflict with the natural values of the Natural Corrals area.

Analysis

This conflict affects about 240 acres in the Natural Corrals area. This area is under consideration for possible designation as an Area of Critical Environmental Concern (ACEC). Surface mining would destroy the natural values of this area such as its unique geologic features and known cultural resources.

Determination

About 240 acres containing approximately 1.2 million tons of coal were determined to be unacceptable for coal development by surface mining methods.

Conflict 4

Surface mining would conflict with ground water recharge and the aquifer supplying the wells for the town of South Superior's sole water source. This conflict was surfaced during the public review period for the proposed Big Sandy MFP coal management decisions issued in June 1981.

Analysis

This conflict affects about 1,040 acres in an area northeast of South Superior. The recharge zone and aquifer (Erickson formation) is highly permeable. Surface mining would present serious hazards of pollution and contamination to the water supply and possible disruption of water recharge and flow.

Determination

About 1,040 acres containing approximately 5.2 million tons of coal were determined to be unacceptable for coal development by surface mining methods. This multiple use planning constraint could be lifted if an adequate alternative water supply could be provided, subject to the satisfaction and approval of the residents of South Superior.

Conflict 5

Surface coal mining would conflict with producing oil and gas areas. This conflict was surfaced during the public review period for the proposed Big Sandy MFP coal decisions issued in June 1981.

Analysis

Most of the public lands within the Big Sandy portion of the Rock Springs KRCRA have been leased for oil and gas. Development of oil and gas reserves may lead to conflicts with coal development, or vice versa, when both occur in the same or adjacent areas.

In the Big Sandy area, the primary concern of the potential conflict between coal development and oil and gas development centers around the producing oil and gas fields. Within these fields, coal development could result in the loss of oil and gas production. There are seven operating oil and gas fields, termed Known Geologic Structures (KGS) within the Big Sandy portion of the Rock Springs KRCRA. Three of these KGSs overlap about 420 acres of unleased Federal coal (i.e., competitive coal areas).

Coal leasing should be allowed within a KGS or portions thereof when mining operations would not interfere with operations in a producing oil and gas field or when such conflicts can be mitigated. Determinations to consider coal leasing in KGSs should involve analyzing the affects of coal development upon oil and gas operations on a case-by-case basis, depending upon (1) the completion, production, and abandonment of the wells and facilities and (2) the timing of these activities with that of physical coal development activities. If coal development would interfere with oil and gas operations and production in a KGS, then further consideration for coal leasing in those areas should be deferred.

Determination

Defer coal leasing in producing oil and gas fields (KGSs) unless or until it is determined that surface coal mining methods will not interfere with economic recovery of the oil and gas resources or that such conflicts can be mitigated. This decision potentially affects about 420 acres containing approximately 2.1 million tons of coal.

Explanation

The intent of this determination is to maximize production of energy resources and avoid situations where development of one energy resource would be to the detriment of another. As explained below, this deferment may or may not be long-lived and may ultimately affect more or less than the 420 acres identified.

A formal call for expressions of coal leasing interest will immediately follow issuance of the final coal management decisions. Anyone interested in leasing coal in the deferred KGS areas is invited to supply, along with their "expression", any oil and gas operation and production information that would show there will be no conflicts between oil and gas operations and coal development in the area(s) of interest. With GS confirmation of the information submitted, areas within the KGSs would be available for coal tract delineation and would be given further consideration for coal leasing.

Additionally, before potential coal lease tracts are delineated the GS-Tract Delineation and BLM-Site Specific Analysis teams will conduct a joint field review of possible lease tract areas, especially where there is high coal leasing interest. Any new information gathered in the field regarding oil and gas operations and production will be considered before coal tracts are delineated. Note: This could result in existing KGS areas being available for coal leasing or new KGS areas being identified and deferred where conflicts will exist. Following tract delineation any new oil and gas operations occurring within a coal tract or new oil and gas information regarding a tract will be analyzed during the coal activity planning process. Since the coal unsuitability criteria were applied to the KGS areas, it will be possible to lift this multiple use planning constraint whenever GS determines either that all or protions of a KGS are no longer required for oil and gas operations or that conflicts between oil and gas operations and coal development can be mitigated.

The detailed procedures for determining oil and gas and coal development conflicts and for applying this planning constraint have been jointly developed by BLM and GS under Department of the Interior guidelines. Information on these procedures is available at the BLM Rock Springs District Office.

Competitive Federal Coal Areas (Subsurface Mining)

Conflict 1

Subsurface mining would conflict with proposed utility corridors.

Analysis

This conflict potentially affects about 1,760 acres in the proposed utility corridor which will cross the northern part of the Big Sandy KRCRA area. A possible route change of the proposed Northern utility corridor or negotiations with potential corridor users could reduce the area of conflict. Conversely, final designation of corridors (to occur by April 1982) may expand the area of conflict.

Determination

About 1,760 acres containing approximately 12.0 million tons of coal were determined to be acceptable for further consideration for coal development by subsurface mining methods pending the outcome of the ongoing utility corridor study. Actual conflicts in these areas should be identified and resolved during the coal activity planning process or in mining and reclamation plan development. This could result in situations where coal development would be unacceptable or where it would be subject to valid existing rights and negotiation for relocation if necessary (of rights-of-way, the corridor, etc.), appropriate stipulations, etc. Approval of all such negotiable possibilities will be subject to consistency with current planning and management decisions.

Conflict 2

Subsurface coal mining would conflict with the urban expansion areas for the cities of Rock Springs and South Superior.

Analysis

This conflict affects about 1,520 acres in the area north of Rock Springs and the area surrounding South Superior. An additional 380 acres near South Superior would be affected due to the noise, dust, and visual intrusions that would result from surface operations and impacts associated with subsurface mining.

These urban expansion areas will be used to accommodate future growth of Rock Springs and South Superior. Industrial activity is not compatible with residential uses. Sweetwater County and the cities of Rock Springs and South Superior would not be in favor of coal development adjacent to urban areas.

Determination

About 1,520 acres containing approximately 10.3 million tons of coal were determined to be unacceptable for subsurface mining and, about 380 acres were determined to be unacceptable for surface operations and impacts associated with subsurface mining.

Conflict 3

Surface operations and impacts associated with subsurface mining would conflict with the natural values of Emmons Cone.

Analysis

This conflict affects about 160 acres in the Emmons Cone area. Surface operations and impacts associated with subsurface mining would destroy the natural values of the area which contains a unique geologic landmark.

Determination

About 160 acres were determined to be unacceptable for the surface operations and impacts associated with subsurface mining.

Conflict 4

Surface opeations and impacts associated with subsurface mining would conflict with the natural values of the Natural Corrals area.

Analysis

This conflict affects about 320 acres in the Natural Corrals area which is under consideration for possible designation as an ACEC. Surface operations and impacts would destroy the natural values of the area such as its unique geologic features and known cultural resoures.

Determination

About 320 acres were determined to be unacceptable for the surface opertions and impacts associated with subsurface mining.

Conflict 5

Subsurface coal mining would conflict with producing oil and gas areas. This conflict was surfaced during the public review period for the proposed Big Sandy MFP coal management decisions issued in June 1981.

Analysis

The preceding analysis and explanation concerning this same conflict on surfce mining areas applies here.

Determination

Defer coal leasing in producing oil and gas fields (KGSs) unless or until it is determined that subsurface coal mining methods and development will not interfere with economic recovery of the oil and gas resources or that such conflicts can be mitigated. This decision potentially affects about 960 acres containing approximately 6.5 million tons of coal.

Conflict 6

Surface operations and impacts associated with subsurface mining would conflict with ground water recharge and the aquifer supplying the wells for the town of South Superior's sole water source. Subsurface mining, itself, is not involved in this situation because the mineable coal lies sufficiently below the recharge and aquifer zones of concern. This conflict was surfaced during the public review period for the proposed Big Sandy MFP coal management decisions issued in June 1981.

Analysis

This conflict affects about 1,760 acres in an area northeast of South Superior. The recharge zone and aquifer (Erickson Formation) is highly permeable. Surface operations and impacts associated with subsurface mining would present serious hazards of pollution and contamination to the water supply.

Determination

About 1,760 acres were determined to be unacceptable for surface operations and impacts associated with subsurface mining. This multiple use planning constraint could be lifted if an adequate alternative water supply could be provided, subject to the satisfaction and approval of the residents of South Superior.

Federal Surface-State Coal Areas (Surface and Subsurface Mining)

Conflict 1

Surface mining and surface operations and impacts associated with subsurface mining would conflict with the natural values of the Cedar Canyon area.

Analysis

This conflict affects about 160 acres in the Cedar Canyon area. This area is under consideration for possible designation as an ACEC. Cedar Canyon contains several significant cultural resource sites and provides habitat for large numbers of raptors. Any type of surface coal development and related activities would destroy the natural values of the area.

Determination

About 160 acres of the areas reviewed were determined to be unacceptable for surface mining and for surface operations and impacts associated with subsurface mining.

PRLA Areas (Surface and Subsurface Mining)

Conflict 1

Surface mining and surface operations and impacts associated with subsurface mining would conflict with the natural values of the Cedar Canyon area.

Analysis

This conflict affects about 180 acres in the Cedar Canyon area. This area is under consideration for possible designation as an ACEC. Cedar Canyon contains several significant cultural resource sites and provides habitat for large numbers of raptors. Any type of surface coal development and related activities would destroy the natural values of the area.

Determination

About 180 acres were determined to be unacceptable for surface mining and for surface operations and impacts associated with subsurface mining. It should be noted that additional multiple use conflicts may be identified in the course of preparing environmental assessments and other PRLA processing requirements yet to be completed.

Nonproducing Coal Lease Areas (Surface and Subsurface)

Conflict 1

Surface mining and surface operations and impacts associated with subsurface mining would conflict with the Cedar Canyon and the Greater Sand Dunes areas. Both of these areas are under consideration for possible designation as ACECs.

Analysis

About 600 acres of coal lease #W-0220486 are within the Greater Sand Dunes area. About 1,280 acres of coal lease #W-0313201 are within the Cedar Canyon area. Surface coal mining and surface operations and impacts associated with subsurface mining would destroy the critical environmental values in these areas.

Determination

About 1,880 acres were determined to be unacceptable for surface mining and for surface operations and impacts associated with subsurface mining within coal lease #W-0220486 and #W-0313201.

SURFACE OWNER CONSULTATION (SURFACE MINING)

This consultation requirement concerned only those private surface-Federal coal (split estate) lands in competitive coal areas that remained acceptable for surface coal mining after applying the coal unsuitability criteria and conducting the multiple use conflict analysis. Since none of the surface owners involved expressed a preference against surface mining the Federal coal on their lands, no additional split estate lands were determined to be unavailable for further consideration for leasing.

Note: Surface owner consultation does not apply to Federal surface-State coal areas, PRLAs, nonproducing leases, or to competitive Federal coal areas where only subsurface mining is being considered.

SUMMARY OF THE COAL SCREENING PROCESS

Table 1-11 and Maps 1-4, 1-5, and 1-6 contain the summary results of the coal screening process. These results were used to formulate the final decisions described earlier in this brochure.

ACTIONS TO FOLLOW

A formal call for expressions of interest in leasing Federal coal will follow immediately. This will involve the competitive coal areas identified as acceptable, acceptable pending study and deferred from leasing. Exchange proposals must be formally submitted during this expression period to avoid potential conflicts with delineating tracts for competitive coal leasing.

The second Federal coal lease sale for the Green River-Hams Fork Coal Production Region is scheduled to be held in March 1984. Public notices will be issued for the various actions and events leading up to the lease sale.

Processing of PRLAs will continue and PRLA leasing decisions will be made when processing is completed.

TABLE 1-1

FEDERAL COAL DEVELOPMENT POTENTIAL

Competitive Coal Areas

	Acres		Tons [1] (Millions)
1. High and Moderate Potential for [2]			
a. Surface Mining Methods	6,440		31.8
b. Subsurface Mining Methods	21,880		148.4
c. Surface and Subsurface Mining Methods	5,160	(Surface)	25.5
		(Subsurface)	35.0
2. Other areas assumed to have Moderate Potential for Surface and Subsurface Mining Methods [3]	32,960	(Surface)	163.0
		(Subsurface)	223.5

[1] Tonnage computation for this and all other tables was based upon an average of 4,945 tons per acre for surface mining methods (100% recovery) and 6,781 tons per acre for subsurface mining methods (50% recovery). These averages were derived from high and moderate coal development potential areas as identified by Geological Survey CRO-CDP Maps and open file reports.

[2] Derived from Geological Survey CRO-CDP Maps.

[3] Derived from indications of industry interest and other available resource data.

TABLE 1-2

APPLICATION OF UNSUITABILITY CRITERIA
COMPETITIVE FEDERAL COAL AREAS

Criterion	Surface Mining Methods				Subsurface Mining Methods				Surface Operations & Impacts Associated With Subsurface Mining[1]
	Unsuitable[1]		Acceptable[1]		Unsuitable[1]		Acceptable[1]		
	Acres	Tons (Millions)	Acres	Tons (Millions)	Acres	Tons (Millions)	Acres	Tons (Millions)	Acres
1. Federal Land Systems	880	4.4	43,680	216.0	840	5.7	59,160	401.2	840[2]
2. Rights-of-Way & Easements	1,242[3]	6.1	43,318	214.2	1,278[3]	8.7	58,722	398.2	302[2] 976[4]
3. Buffer Zones for Rights-of-Way, Communities & Buildings	118	0.06	44,442	219.4	108	0.5	59,892	406.4	108[2]
4. Wilderness Study Areas	0	0	44,560	220.4	0	0	60,000	406.9	0
5. Scenic Areas	0	0	44,560	220.4	0	0	60,000	406.9	0
6. Land Used for Scientific Study	0	0	44,560	220.4	0	0	60,000	406.9	0
7. Historic Lands & Sites	960	4.7	43,600	215.6	0	0	60,000	406.9	1,440[2]
8. Natural Areas	0	0	44,560	220.4	0	0	60,000	406.9	0
9. Federally Listed Endangered Species Habitat	0	0	44,560	220.4	0	0	60,000	406.9	0
10. State Listed Endangered Species Habitat	0	0	44,560	220.4	0	0	60,000	406.9	0
11. Bald & Golden Eagle Nests	4,390	21.7	40,170	198.7	0	0	60,000	406.9	3,620[4]
12. Bald & Golden Eagle Roost & Concentration Areas	0	0	44,560	220.4	0	0	60,000	406.9	0
13. Falcon Cliff Nesting Sites	4,600	22.7	39,960	197.7	0	0	60,000	406.9	4,230[4]
14. Migratory Bird Habitat	6,320	31.2	38,240	189.2	0	0	60,000	406.9	5,810[4]
15. Habitat for State High-Interest Wildlife	0[3]	0	44,560	220.4	0	0	60,000	406.9	0
16. Floodplains	240[3]	1.2	44,320	219.2	240[3]	1.6	59,760	405.3	240[2] [3]
17. Municipal Watersheds	0	0	44,560	220.4	0	0	60,000	406.9	0
18. National Resource Waters	0	0	44,560	220.4	0	0	60,000	406.9	0
19. Alluvial Valley Floors	0	0	44,560	220.4	0	0	60,000	406.9	0
20. State-Proposed Criteria	0	0	44,560	220.4	0	0	60,000	406.9	0

[1] The acres and Federal coal tonnages listed under each criterion sometimes overlap areas found unsuitable through application of other criteria. Therefore, the total acres and tons excluded from development by all the unsuitability criteria will be less than the sum of the individual listings under each criterion.

[2] Unsuitable.

[3] After exceptions.

[4] Acceptable for only very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

TABLE 1-3

APPLICATION OF UNSUITABILITY CRITERIA
FEDERAL SURFACE-STATE COAL AREAS

	Criterion	Surface Mining Methods Unsuitable Acres	Surface Mining Methods Acceptable Acres	Subsurface Mining Methods Unsuitable Acres	Subsurface Mining Methods Acceptable Acres	Surface Operations and Impacts Associated with Subsurface Mining Acres[1/]
1.	Federal Land Systems	0	5,760	0	5,760	0
2.	Rights-of-Way & Easements	0[2/]	5,760	0	5,760	0
3.	Buffer Zones for Rights-of-Way, Communities & Buildings	0	5,760	0	5,762	0
4.	Wilderness Study Areas	0	5,760	0	5,760	0
5.	Scenic Areas	0	5,760	0	5,760	0
6.	Land Used for Scientific Study	0	5,760	0	5,760	0
7.	Historic Lands & Sites	0	5,760	0	5,760	0
8.	Natural Areas	0	5,760	0	5,760	0
9.	Federally Listed Endangered Species Habitat	0	5,760	0	5,760	0
10.	State Listed Endangered Species Habitat	0	5,760	0	5,760	0
11.	Bald & Golden Eagle Nests	1,040	4,720	0	5,760	1,040[3/]
12.	Bald & Golden Eagle Roost & Concentration Areas	0	5,760	0	5,760	0
13.	Falcon Cliff Nesting Sites	160	5,600	0	5,760	160[3/]
14.	Migratory Bird Habitat	1,120	4,640	0	5,760	1,120[3/]
15.	Habitat for State High-Interest Wildlife	0[2/]	5,760	0	5,760	0
16.	Floodplains	0	5,760	0	5,760	0
17.	Municipal Watersheds	0	5,760	0	5,760	0
18.	National Resource Waters	0	5,760	0	5,760	0
19.	Alluvial Valley Floors	0	5,760	0	5,760	0
20.	State-Proposed Criteria	0	5,760	0	5,760	0

1/No areas unsuitable.
2/After exceptions.
3/Acceptable for only very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

TABLE 1-4

APPLICATION OF UNSUITABILITY CRITERIA
PRLA AREAS AND NONPRODUCING COAL LEASE AREAS

Criterion	PRLAs				Nonproducing Leases[1]			
	Surface Mining Methods		Subsurface Mining Methods		Surface Mining Methods		Subsurface Mining Methods	
	Unsuitable	Acceptable	Unsuitable	Acceptable	Unsuitable	Acceptable	Unsuitable	Acceptable
	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres
1. Federal Land Systems	0	2,233	0	2,233	0	17,800	0	17,800
2. Rights-of-Way & Easements	0	2,233	0	2,233	0	17,800	0	17,800
3. Buffer Zones for Rights-of-Way, Communities & Buildings	0	2,233	0	2,233	0	17,800	0	17,800
4. Wilderness Study Areas								
5. Scenic Areas	0	2,233	0	2,233	0	17,800	0	17,800
6. Land Used for Scientific Study	0	2,233	0	2,233	0	17,800	0	17,800
7. Historic Lands & Sites	0	2,233	0	2,233	0	17,800	0	17,800
8. Natural Areas	0	2,233	0	2,233	0	17,800	0	17,800
9. Federally Listed Endangered Species Habitat	0	2,233	0	2,233	N/A	17,800	N/A	17,800
10. State Listed Endangered Species Habitat	0	2,233	0	2,233	N/A	17,800	N/A	17,800
11. Bald & Golden Eagle Nests	910	2,233	910[2]	2,233	N/A	17,800	N/A	17,800
12. Bald & Golden Eagle Roost & Concentration Areas	0	2,233	0	2,233	N/A	17,800	N/A	17,800
13. Falcon Cliff Nesting Sites	0	2,233	0	2,233	N/A	17,800	N/A	17,800
14. Migratory Bird Habitat	910	2,233	910[2]	2,233	N/A	17,800	N/A	17,800
15. Habitat for State High-Interest Wildlife	0	2,233	0	2,233	N/A	17,800	N/A	17,800
16. Floodplains	0	2,233	0	2,233	0	17,800	0	17,800
17. Municipal Watersheds	0	2,233	0	2,233	0	17,800	0	17,800
18. National Resource Waters	0	2,233	0	2,233	0	17,800	0	17,800
19. Alluvial Valley Floors	0	2,233	0	2,233	0	17,800	0	17,800
20. State-Proposed Criteria	0	2,233	0	2,233	0	17,800	0	17,800

[1] Wildlife criteria (9-15) are not applicable to nonproducing leases.

[2] Acceptable for only very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

TABLE 1-5

SUMMARY-APPLICATION OF UNSUITABILITY CRITERIA COMPETITIVE FEDERAL COAL AREAS

Determination	Federal Surface Federal Coal Acres	Federal Surface Federal Coal Tons (Millions)	Private Surface Federal Coal Acres	Private Surface Federal Coal Tons (Millions)	Total Federal Coal Acres	Total Federal Coal Tons (Millions)
			Areas With Surface Mining Potential			
Unsuitable	8,186	40.5	1,220	6.0	9,406	46.5
Acceptable[1]	34,454	170.3	700	3.5	35,154	173.8
			Areas With Subsurface Mining Potential[2]			
Unsuitable	1,534	10.4	680	4.6	2,214	15.0
Acceptable[1]	56,786	385.1	1,000	6.8	57,786	391.8
			Surface Operations And Impacts Associated With Subsurface Mining			
Unsuitable	1,918	N/A	760	N/A	2,678	N/A
Acceptable[3] with limitations	6,546	N/A	200	N/A	6,746	N/A
Acceptable[1]	49,854	N/A	720	N/A	50,576	N/A

[1] Includes exception areas.
[2] Does not include surface operations and impacts associated with subsurface mining.
[3] Acceptable for only very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement, and types of facilities, seasonal occupancy, etc.).

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TABLE 1-6

SUMMARY-APPLICATION OF UNSUITABILITY CRITERIA
FEDERAL SURFACE-STATE COAL AREAS

Determination	Surface Mining Potential (Acres)	Subsurface Mining Potential (Acres)	Surface Operations And Impacts Associated With Subsurface Mining (Acres)
Unsuitable	1,200	0	0
Acceptable	4,560	5,760	4,560
[1/]Acceptable With Limitations	0	0	1,200

[1/]Acceptable for only very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

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TABLE 1-7

SUMMARY-APPLICATION OF UNSUITABILITY CRITERIA
PRLA AND NONPRODUCING COAL LEASE AREAS

	PRLA	Nonproducing Leases		
	Application Serial Number	Lease Serial Number		
Determination	W-0308923 (Acres)	W-0220486 (Acres)	W-3438 (Acres)	W-0313201 (Acres)
Unsuitable Surface Mining	910	0	0	0
Acceptable Surface Mining	1,323	2,480	640	14,680
Unsuitable Subsurface Mining	0	0	0	0
Acceptable Subsurface Mining	2,233	2,480	640	14,680
Unsuitable for Surface operations & Impacts Associated with Subsurface Mining	0	0	0	0
Acceptable for Surface Operations & Impacts Associated with Subsurface Mining	1,323 910[1/]	2,480	640	14,680

1/Acceptable for only very limited surface operations and impacts associated with subsurface mining (e.g., subject to restrictive placement and types of facilities, seasonal occupancy, etc.).

TABLE 1-8

SUMMARY-MULTIPLE USE CONFLICT EVALUATION COMPETITIVE FEDERAL COAL AREAS

Determination	Federal Surface Federal Coal Acres	Federal Surface Federal Coal Tons (Millions)	Private Surface Federal Coal Acres	Private Surface Federal Coal Tons (Millions)	Total Federal Coal Acres	Total Federal Coal Tons (Millions)
			Areas With Surface Mining Potential			
Unacceptable	2,760	13.6	120	0.6	2,880	14.2
Deferred Areas (KGSs)	420	2.1	0	0	420	2.1
Acceptable	31,274	154.7	580	2.9	31,854	157.6
			Areas With Subsurface Mining Potential[1/]			
Unacceptable	1,520	10.3	0	0	1,520	10.3
Deferred Areas (KGSs)	960	6.5	0	0	960	6.5
Acceptable - Pending Utility Corridor Study	1,760	11.9	0	0	1,760	11.9
Acceptable	52,546	356.3	1,000	6.8	53,546	363.1
			Surface Operations And Impacts Associated With Subsurface Mining			
Unacceptable	4,140	N/A	0	N/A	4,140	N/A
Deferred Areas (KGSs)	960	N/A	0	N/A	960	N/A
Acceptable - Pending Utility Corridor Study	1,760	N/A	0	N/A	1,760	N/A
Acceptable	42,716	N/A	1,000	N/A	43,716	N/A

1/Does not include surface operations and impacts associated with subsurface mining.

TABLE 1-9

SUMMARY-MULTIPLE USE CONFLICT EVALUATION FEDERAL SURFACE-STATE COAL AREAS

Determination	Surface Mining Potential (Acres)	Subsurface Mining Potential (Acres)	Surface Operations And Impacts Associated With Subsurface Mining (Acres)
Unacceptable	160	0	160
Acceptable	4,400	5,760	4,400

TABLE 1-10

SUMMARY-MULTIPLE USE CONFLICT EVALUATION
PRLA AND NONPRODUCING COAL LEASE AREAS

	PRLA	Nonproducing Leases		
	Application Serial Number	Lease Serial Number		
Determination	W-0308923 (Acres)	W-0220486 (Acres)	W-3438 (Acres)	W-0313201 (Acres)
Unacceptable Surface Mining	180	600	0	1,280
Acceptable Surface Mining	1,143	1,880	640	13,400
Unacceptable Subsurface Mining	0	0	0	0
Acceptable Subsurface Mining	2,233	2,480	640	14,680
Unacceptable for Surface Operations & Impacts Associated with Subsurface Mining	180	600	0	1,280
Acceptable for Surface Operations & Impacts Associated with Subsurface Mining	2,043	1,880	640	13,400

TABLE 1-11

SUMMARY OF RESULTS-COAL SCREENING PROCESS

Coal Screening Process	Competitive Federal Coal Areas				Federal Surface-State Coal Areas		PRLA Areas[4]		Nonproducing Coal Lease Areas[5]	
	Surface		Subsurface		Surface	Subsurface	Surface	Subsurface	Surface	Subsurface
	Acres[1]	Tons[2]	Acres[1]	Tons[2]	Acres	Acres	Acres	Acres	Acres	Acres
	(Millions)		(Millions)							
1. Known & Assumed High & Moderate Coal Development Potential	44,560	230.4	60,000	406.9	5,760	5,760	N/A	N/A	N/A	N/A
2. Unsuitable Areas	9,406	46.5	2,214	15.0	1,200	0	910	0	0	0
3. Unsuitable for Surface Operations & Impacts Only	N/A	N/A	2,678	N/A	N/A	0	N/A	910	N/A	0
4. Unacceptable Areas	2,880	14.2	1,520	10.3	160	0	180	0	1,880	0
5. Unacceptable for Surface Operations & Impacts Only	N/A	N/A	4,140	N/A	N/A	160	N/A	180	N/A	1,880
6. Unavailable Areas[3]	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
7. Total Area & Federal Coal Excluded From Surface and Subsurface Mining	12,286	60.8	3,734	25.3	1,360	0	1,090	0	1,880	0
8. Deferred Areas (KGSs)	420	2.1	960	6.5	0	0	0	0	0	0
9. Acceptable - Pending Utility Corridor Study	0	0	1,760	11.9	0	0	0	0	0	0
10. Remaining Area & Federal Coal Available for Coal Development	31,854	157.6	53,546	363.1	4,400	5,760	1,143	2,233	15,920	17,800
11. Total Area Unsuitable & Unacceptable for Surface Operations & Impacts[6]	N/A	N/A	9,538	N/A	N/A	160	N/A	1,090	N/A	1,880
12. Remaining Area Acceptable for Surface Operations & Impacts	N/A	N/A	50,462 6,746[7]	N/A	4,400	5,600[7] 1,200	N/A	2,053 910[7]	15,920	15,920

N/A = Not Applicable

[1] Actual review area (portion of Rock Springs KRCRA in Big Sandy Resource Area) surface acreage is 66,480 acres excluding PRLAs and nonproducing leases.

[2] Tonnage computation was based on an average of 4,945 tons of coal per acre for surface mining methods (100% recovery) and 6,781 tons of coal per acre for subsurface mining methods (50% recovery). These averages were derived from high and moderate coal potential areas as identified by Geological Survey CRO-CDP Maps and open file reports.

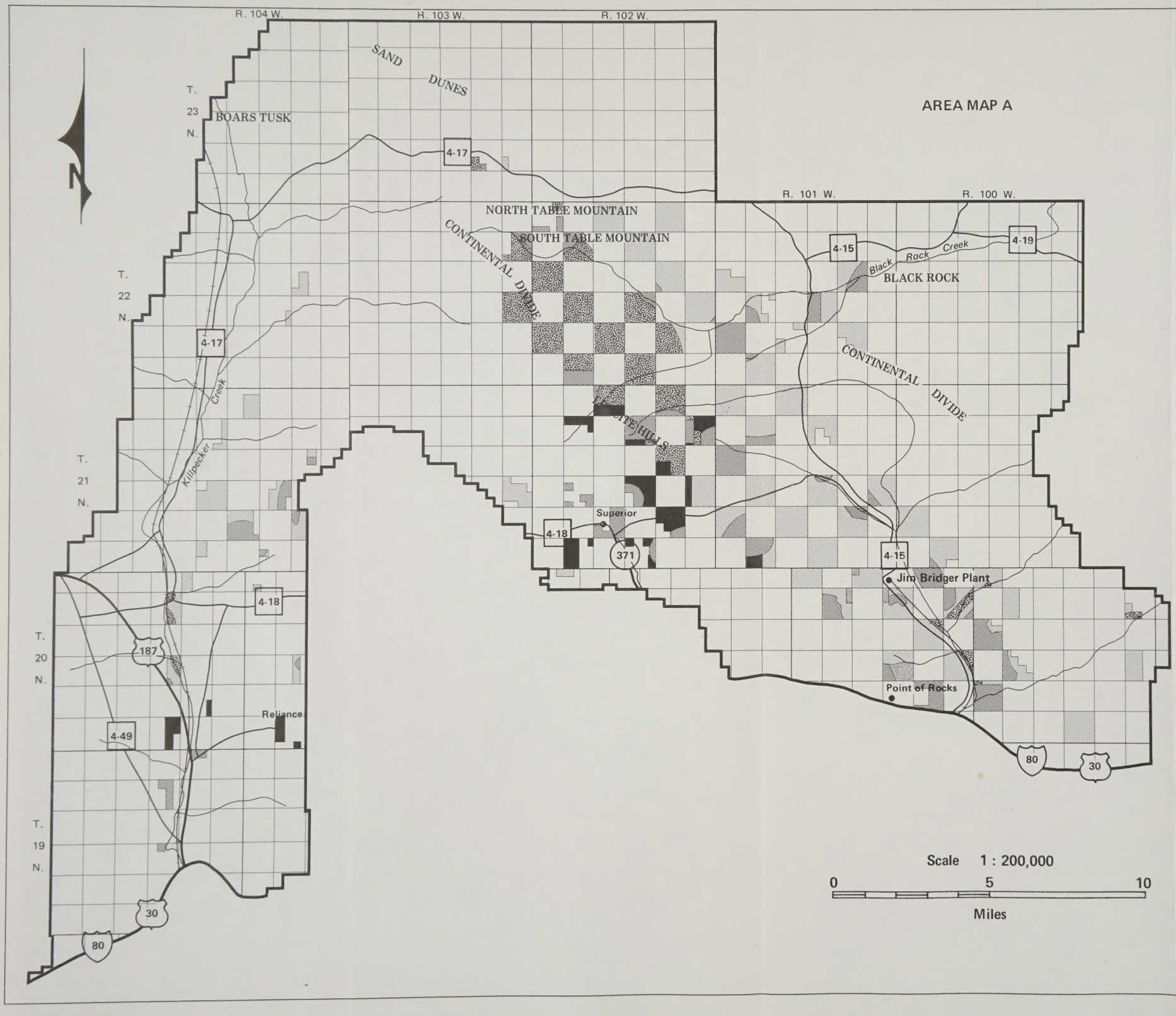
[3] From surface owner consultaiton.

[4] The total PRLA area reviewed was 2,233 acres.

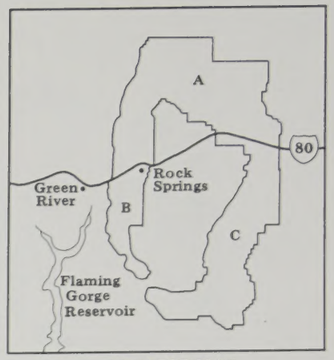
[5] The total Nonproducing Coal Lease area reviewed was 17,800 acres.

[6] Sum of lines 3, 5, 8, and 9.

[7] Acceptable for only very limited surface operations and impacts associated with subsurface mining (included in larger acceptable acreage figured on Line 12). These areas are subject to restrictive placement and types of facilities, seasonal occupancy, etc.).



AREA MAP A



LOCATOR MAP

Unsuitable Areas (Criteria 1, 2, 3, 7, 11, 13, 14, 16)

Exception Areas (Acceptable After Considering Criteria 15 and 16 Exceptions)

Unacceptable Areas (Multiple Use Conflicts)

Deferred Areas (KGSs)

Acceptable Areas

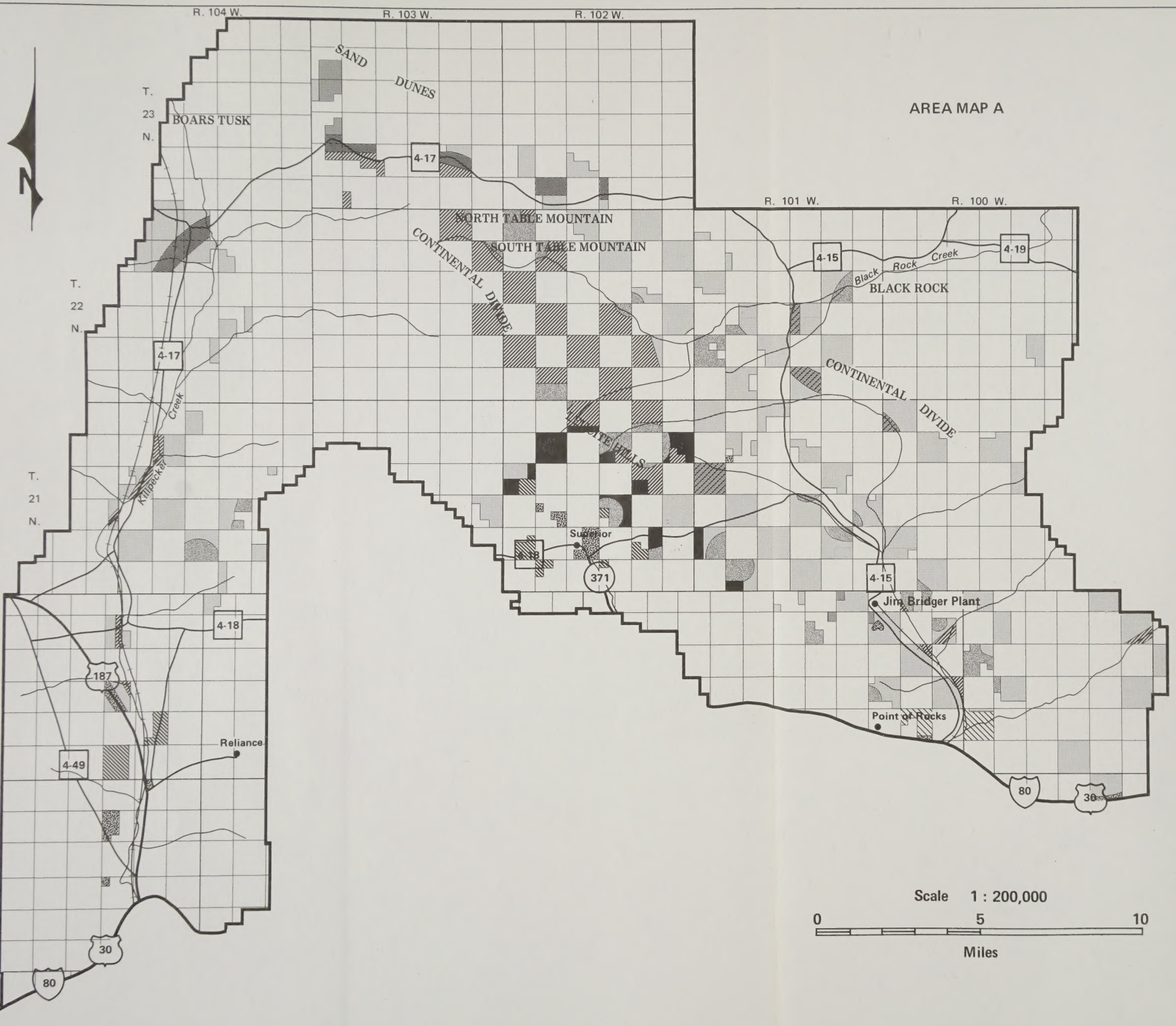
Scale 1 : 200,000

0 5 10

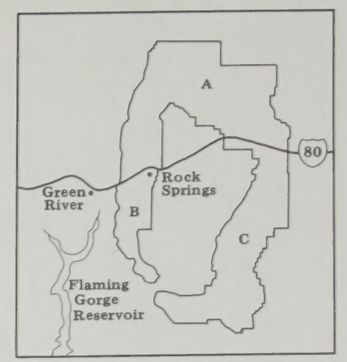
Miles

MAP 1–4

FEDERAL COAL MANAGEMENT DECISIONS: SURFACE MINING (Competitive Coal Areas)



AREA MAP A



LOCATOR MAP

Scale 1 : 200,000

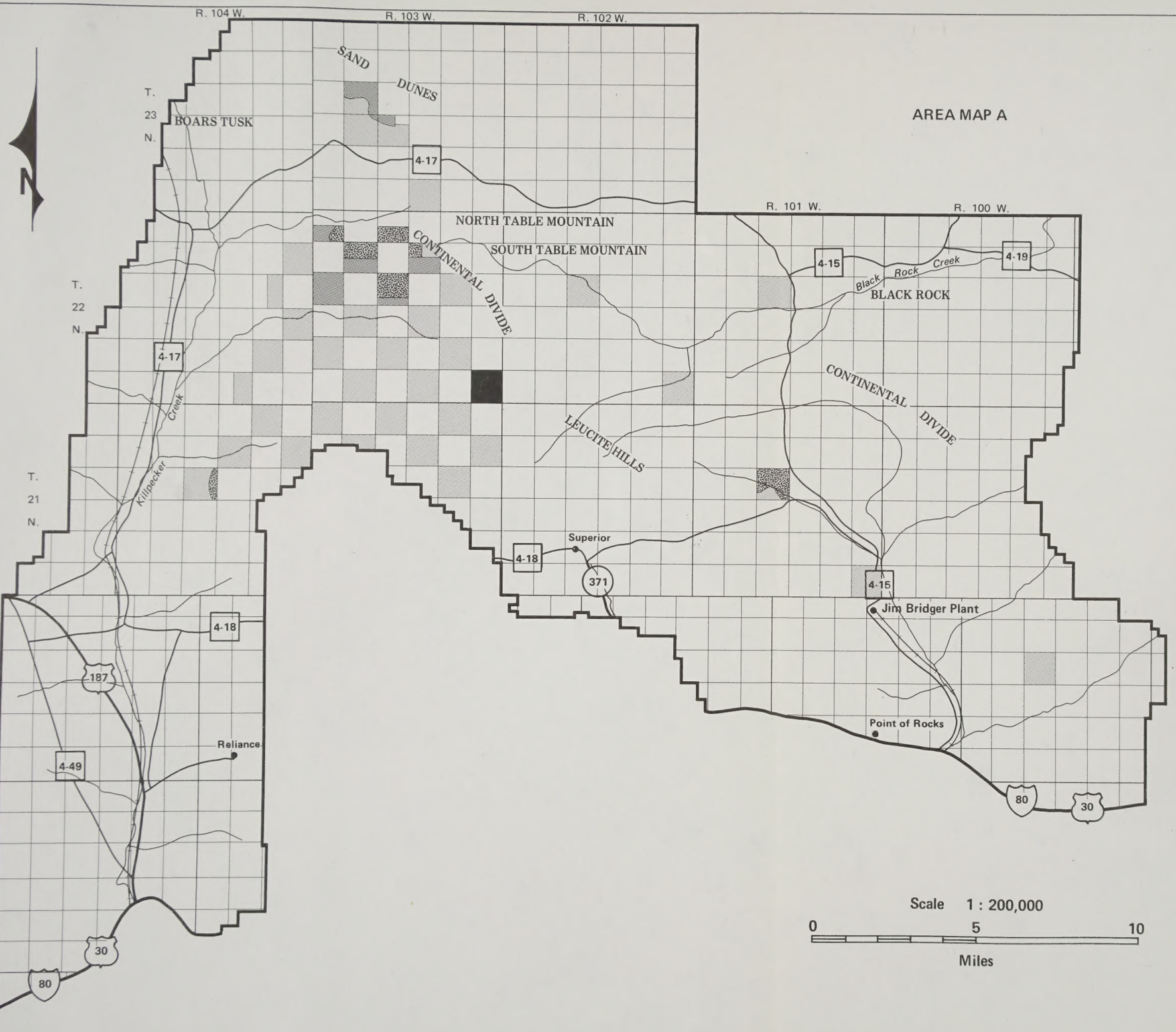
0 5 10

Miles

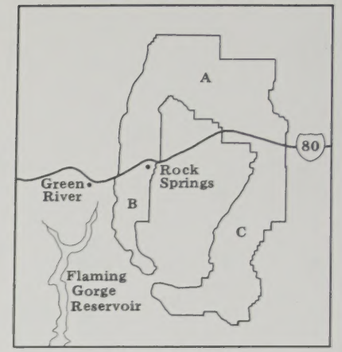
- Unsuitable Areas for Mining and for Related Surface Operations & Impacts (Criteria 1, 2, 3, 16)
- Unsuitable Areas for Related Surface Operations & Impacts Only– (Criterion 7) but Acceptable for Mining
- Unsuitable Areas for Mining (Criterion 2) but Acceptable for Only Limited Related Surface Operations & Impacts
- Acceptable Areas for Mining and for Only Limited Related Surface Operations & Impacts (Criteria 11, 13, 14)
- Exception Areas–Acceptable for Mining and Acceptable for Related Surface Operations & Impacts After Exceptions (Criteria 15 and 16)
- Multiple Use Conflicts–Unacceptable Areas for Mining and for Related Surface Operations & Impacts
- Multiple Use Conflicts–Unacceptable Areas for Related Surface Operations & Impacts Only but Acceptable for Mining
- Deferred Areas (KGSs)
- Acceptable Areas Pending Utility Corridor Study
- Acceptable Areas for Mining and for Related Surface Operations & Impacts

MAP 1–5

FEDERAL COAL MANAGEMENT DECISIONS: SUB–SURFACE MINING (Competitive Coal Areas)



AREA MAP A



LOCATOR MAP

Scale 1 : 200,000

0 5 10

Miles

SURFACE MINING METHODS

- Unsuitable Areas (Criteria 11, 13, 14)
- Unacceptable Areas (Multiple Use Conflicts)
- Acceptable Areas
- Exception Areas (Criterion 15)

SUB–SURFACE MINING METHODS

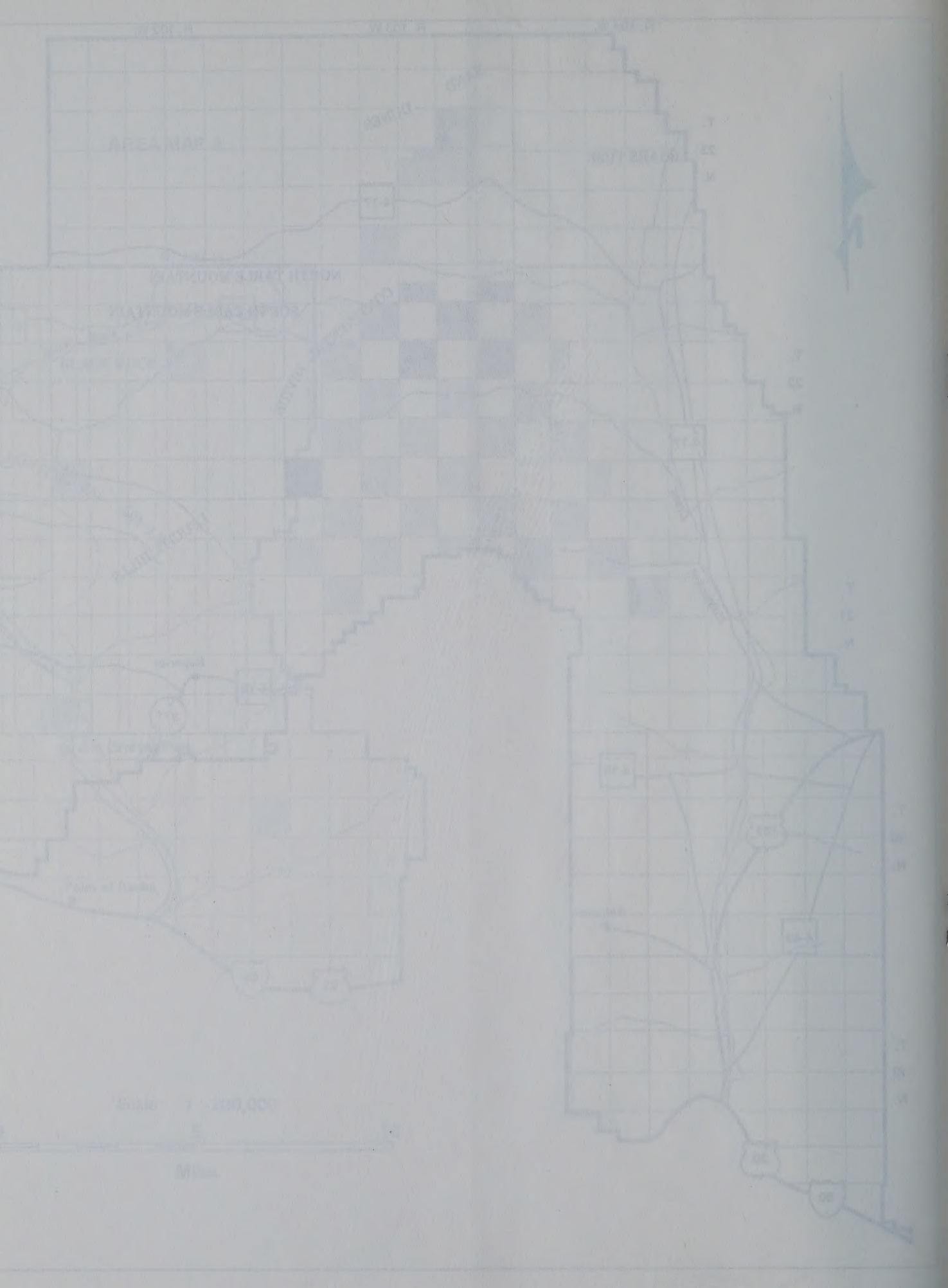
- Acceptable Areas for Mining and for Only Limited Related Surface Operations & Impacts (Criteria 11, 13, 14)
- Multiple Use Conflicts–Unacceptable Areas for Related Surface Operations & Impacts Only but Acceptable for Mining
- Exception Areas–Acceptable for Mining and Acceptable for Related Surface Operations & Impacts After Exceptions (Criterion 15)

All Federal Surface–State Coal Areas, PRLAs and Non–Producing Coal Leases Are Acceptable For Sub–Surface Mining

MAP 1–6

PRLAs, FEDERAL SURFACE–STATE COAL AREAS, and NON–PRODUCING COAL LEASES

RESULTS of COAL UNSUITABILITY REVIEW and MULTIPLE USE CONFLICT EVALUATION



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